

## **The Toxic Chemical Waste at Sepetiba Bay: Assessing a Coastal Environmental Hazard in Brazil**

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Metallic elements are essential to the global economy; however they can cause ecological and health damage when organisms are exposed to such chemicals during a certain period. In Brazil, many metallurgic industrial centers were established in coastal areas during the 1960s because of the policy adopted by the government towards industrial exportation. Forty years later, the new administration has implemented a national strategy to strengthen this sector and an increase in the production of metals' production is expected. Estuaries are potential sites for the establishment of this type of industry because of its natural features. Many of these sites have experienced anthropogenic pressure along the Brazilian coast. To address the issues related to the metal industry and to encourage policy research on these issues, a preliminary case study is presented here. Inga Mercantile is a Zinc-smelter plant located in Sepetiba Bay at Rio de Janeiro State that has disposed chemical waste for decades in an illegal accumulation tank reaching very high levels of contamination by metals (mainly Zinc and Cadmium). The dam that holds the tank was poorly built leading to constant leakage to the bay. In the last 9 years there were two major accidents when a significant amount of chemical waste was discharged into the bay. The issue is related to economical, institutional and socio-cultural factors. First, Inga was one of only three zinc producers in Brazil. Second, the government agencies responsible for the enforcement and environmental regulation in Brazil had overlapping responsibilities and they kept passing the problem to one another. Finally, based on personal knowledge and supported by anthropological studies, it is clear that the majority of the Brazilian population is not eager to take part in public decision-making and to exercise their civil rights, despite their awareness and the personal experience of the adverse impacts. In 2003, the federal justice determined that the state government would have to start immediate repair of the dam and treatment of the waste. Based on this preliminary analysis of the case, it is suggested that further policy research should focus on a clearer delineation of government agencies responsibilities with regard to regulating the metal industry waste disposal and how public participation can be increased, among others.